

AMENDMENTS TO THE CLAIMS

1-4. (Canceled)

5. (Currently Amended) A method for obtaining a recording pulse parameter by reading recording pulse parameters from a writable optical disc to which are prerecorded recording pulse parameters defining recording pulse position information defining either one of a leading mark-edge pulse parameter and a trailing mark-edge pulse parameter for each of plural possible mark length and space length combinations, said method comprising:

performing a first test write to the optical disc using the recording pulse position information for one combination selected from all mark length and space length combinations in the recording pulse parameters;

reproducing the first test write and detecting a first jitter from the reproduced signal;

adding a first specific amount of change to the recording pulse position information to change either one of the leading mark-edge pulse parameter and the trailing mark-edge pulse parameter for the one combination selected from all mark length and space length combinations, and performing a second test write to the optical disc using the changed recording pulse position information;

reproducing the second test write and detecting a second jitter from the reproduced signal; and

comparing the first jitter and second jitter, and selecting the recording pulse position information used for the test write with less jitter,

wherein when one recording pulse position information is selected for one combination selected from all mark length and space length combinations, and another recording pulse position information is selected for another combination selected from all mark length and space length combinations, an intermediate recording pulse position information for a combination between said one and another combinations is obtained by interpolation from the one recording pulse position information and the another recording pulse position information.

6-9. (Canceled)

10. (Currently amended) An apparatus for obtaining a recording pulse parameter by reading recording pulse parameters from a writable optical disc to which are prerecorded recording pulse parameters defining recording pulse position information defining either one of a leading mark-edge pulse parameter and a trailing mark-edge pulse parameter for each of plural possible mark length and space length combinations, said apparatus comprising:

a storing device operable to store the recording pulse information;
a test writing device operable to perform a test write to the optical disc using the recording pulse position information stored in said storing device;

a jitter detector operable to reproduce the test write and to detect a jitter from the reproduced signal;

a correction device operable to add a specific amount of change to the recording pulse position information to change either one of the leading mark-edge pulse parameter and the trailing mark-edge pulse parameter for one combination selected from all mark length and space length combinations stored in said storing device so as to change the recording pulse position information;

a controller operable to control said test write device and said jitter detector to repeat the test write and the jitter detection when the recording pulse position information is changed to obtain pulse jitters; and

a selection device operable to compare the jitters, and to select the recording pulse position information used for the test write with less jitter,

wherein when one recording pulse position information is selected for one combination selected from all mark length and space length combinations, and another recording pulse position information is selected for another combination selected from all mark length and space length combinations, an intermediate recording pulse position information for a combination between said one and another combinations is obtained by interpolation from the one recording pulse position information and the another recording pulse position information.

11. (Currently amended) A method for determining a recording pulse parameter for an optical disc having prerecorded recording pulse parameters defining recording pulse position information defining either one of a leading mark-edge pulse parameter and a trailing mark-edge pulse parameter for each of a plurality of mark length and space length combinations, said method comprising:

performing a first test write to the optical disk using the prerecorded recording pulse parameter for a first mark length and space length combination;

reproducing the first test write and detecting a first jitter from the reproduced first test write;

adding a first correction value to the prerecorded recording pulse parameter to change either one of the leading mark-edge pulse parameter and the trailing mark-edge pulse parameter to form a second recording pulse parameter and performing a second test write to the optical disc using the second recording pulse parameter;

reproducing the second test write and detecting a second jitter from the reproduced second test write;

comparing the first jitter with the second jitter;

selecting either the prerecorded recording pulse parameter or the second recording pulse parameter for the first mark length and space length combination based on the comparison of the first jitter with the second jitter;

wherein when one recording pulse parameter is selected for one mark length and space length combination and another recording pulse parameter is selected for another mark length and space length combination, an intermediate recording pulse parameter for a combination between the one and another combinations is obtained by interpolation from said one and another recording pulse parameters.

12. (Currently amended) An apparatus for determining a recording pulse parameter for a writable optical disc to which are prerecorded recording pulse parameters defining recording pulse position information defining either one of a leading mark-edge pulse parameter and a trailing mark-edge pulse parameter for each of a plurality of mark length and space length combinations, said apparatus comprising:

a storing device operable to store the recording pulse parameters;

a test writing device operable to perform a first test write to the optical disc using one prerecorded recording pulse parameter stored in said storing device;

a correction device operable to add a correction value to said one recording pulse parameter to change either one of the leading mark-edge pulse parameter and the trailing mark-edge pulse parameter to form a corrected recording pulse parameter, said test writing device being operable to perform a second test write to the optical disc using the corrected recording pulse parameter;

a jitter detector operable to reproduce the first test write and the second test write and to detect a first jitter from the reproduced first test write and a second jitter from the reproduced second test write; and

a selection device operable to compare the first jitter with the second jitter;
wherein said selection device is operable to select either said one recording pulse parameter or the corrected recording pulse parameter based on the comparison of the first jitter with the second jitter; and

wherein when one recording pulse parameter is selected for one mark length and space length combination and another recording pulse parameter is selected for another mark length and space length combination, an intermediate recording pulse parameter for a combination between the one and another combinations is obtained by interpolation from the one and another recording pulse parameters.